

## COSTA RICAN CLIMATOLOGICAL DATA.

Communicated by Mr. H. PITTIER, Director, Physico-Geographic Institute.

TABLE 1.—Hourly observations at the Observatory, San José de Costa Rica, during July, 1904.

Hours.	Pressure.		Temperature.		Relative humidity.		Rainfall.		
	Observed, 1904.		Normal, 1889-1903.		Observed, 1904.		Observed, 1904.		
	Inches.	Inches.	° F.	° F.	%	%	Inches.	Inches.	Hrs.
1 a. m.	26.15	26.14	63.1	64.0	94	91	0.02	0.04	1.00
2 a. m.	26.13	26.12	62.8	63.7	92	91	0.02	0.04	
3 a. m.	26.12	26.11	62.4	63.1	89	91	0.32	0.08	1.00
4 a. m.	26.11	26.10	62.3	62.8	88	91	0.12	0.04	1.50
5 a. m.	26.12	26.10	62.1	62.8	87	91	0.02	0.01	0.25
6 a. m.	26.12	26.11	62.1	62.4	86	91	0.02		
7 a. m.	26.13	26.12	62.4	63.0	85	90	0.02		
8 a. m.	26.14	26.13	65.8	65.3	76	84	0.03		
9 a. m.	26.15	26.14	70.5	69.3	70	76	0.04		
10 a. m.	26.15	26.15	71.4	72.1	68	73	0.03		
11 a. m.	26.15	26.15	74.3	74.1	65	69	0.06		
Noon	26.14	26.13	76.2	75.0	60	68	0.19		
1 p. m.	26.13	26.13	75.2	75.6	69	69	0.45	0.58	1.05
2 p. m.	26.11	26.11	75.4	75.0	68	70	0.64	0.72	1.16
3 p. m.	26.09	26.09	75.2	73.6	68	69	0.48	0.94	3.68
4 p. m.	26.09	26.09	72.7	71.9	75	77	1.01	1.47	2.20
5 p. m.	26.09	26.09	69.9	70.0	81	82	0.40	1.40	2.79
6 p. m.	26.10	26.10	68.0	68.4	86	84	0.80	1.51	4.33
7 p. m.	26.12	26.11	66.4	66.9	88	88	0.28	0.87	4.28
8 p. m.	26.13	26.11	65.5	66.0	90	89	0.40	0.72	3.17
9 p. m.	26.14	26.14	64.8	65.5	90	89	0.12	0.35	2.50
10 p. m.	26.15	26.15	64.5	64.9	90	90	0.04	0.23	0.50
11 p. m.	26.16	26.16	63.8	64.6	91	90	0.11		
Midnight	26.15	26.15	63.5	64.2	92	91	0.02	0.07	1.08
Mean	26.13	26.12	67.6	67.6	81	84			
Minimum	26.02	25.98	59.2	55.8					
Maximum	26.20	26.24	83.8	84.6					
Total							5.12	9.57	30.49

REMARKS.—At San José the barometer is 3,335 feet above sea level. Readings are corrected for gravity, temperature, and instrumental error. The hourly readings for pressure, and wet and dry bulb thermometers, are obtained by means of Richard registering instruments, checked by direct observations every three hours from 7 a. m. to 10 p. m. The thermometers are 5 feet above ground and are corrected for instrumental errors. The total hourly rainfall is as given by Hottinger's self-register, checked once a day. Under maximum, the greatest hourly rainfall for the month is given. The standard rain gage is 5 feet above ground. Since January 1, 1902, observations at San José have been made on seventy-fifth meridian time, which is 0 hour, 36 minutes, 13.3 seconds in advance of San José local time. The normals for pressure, temperature, and relative humidity have been adjusted to this time; the normal for rainfall in Table 1 and the sunshine observations and normal in Table 2 refer to local time. At Port Limón the hours of direct observation are 8 a. m., 2 and 8 p. m. San José local time; the barometer is 14 feet above sea level. The means for temperature and relative humidity in Table 4 are obtained from two-hourly readings given by a Richard self-registering thermometer.

TABLE 2.—San José, July, 1904.

Time.	Sunshine.		Cloudiness.		Temperature of the soil at depth of—				
	Observed, 1904.		Observed, 1904.		6 inches.				
	Hours.	Hours.	%	%	° F.	° F.	° F.	° F.	° F.
7 a. m.	5.21	8.32	70	66	69.4	70.0	71.1	69.4	70.5
8 a. m.	13.77	15.86							
9 a. m.	17.87	17.78							
10 a. m.	17.05	16.41	80	72	68.2	69.8	70.9	70.7	
11 a. m.	14.96	14.61							
Noon	8.88	10.49							
1 p. m.	8.19	9.59	87	83	70.2	70.0	70.9	69.4	
2 p. m.	7.60	9.19							
3 p. m.	11.73	7.82							
4 p. m.	7.06	5.42	90	92	70.7	70.3	70.9	70.7	
5 p. m.	2.75	3.06							
6 p. m.	0.98	1.21							
7 p. m.			85	89	70.7	70.4	71.1	70.7	
8 p. m.									
9 p. m.									
10 p. m.			82	78	70.3	70.3	71.1	70.7	
11 p. m.									
Midnight									
Mean			83	80	70.2	70.7	71.1	70.7	70.5
Total	115.75	119.63							

TABLE 3.—Rainfall at stations in Costa Rica, July, 1904.

Stations.	Height above sea level.	Observed, 1904.		Averages.	
		Amount.	Number of days.	Number of years.	Amount.
		Inches.			Inches.
Sipurio (Talamanca)	197	6.57	18	4	11.26
Boca Banano	10	11.10	23	8	12.24
Port Limon	10			10	16.85
Swamp Mouth	10	1.42	25	6	12.01
Zent	66	14.41	14	3	9.80
Siquirres	197	.91	8	6	10.04
Dos Novillos	400				
Guapiles	984	1.64	20	4	12.32
Cariblanco (Sarapiquí)	2,740			6	19.37
San Carlos	528	14.06	26	6	16.50
Las Lomas	873	1.80	17	4	13.60
Peralta	1,089	1.58	19	6	12.01
Turrialba	2,034			9	10.83
Juan Vinas	3,412	2.48	16	8	8.03
Santiago	3,609	4.80	18	3	9.02
Paraiso	4,383	6.34	16	3	7.40
Cachi	3,346			3	9.37
Las Conchavas	4,386	3.39	27	3	5.98
Cartago	4,761			3	4.92
Tres Rios	4,265	3.03	14	15	7.68
San Francisco Guadalupe	3,894	5.98	18	8	9.37
San José	3,806	5.12	18	15	9.61
La Verbera	3,740	4.37	19	8	8.86
Nuestro Amo	2,595	10.67	16	8	9.88
Alajuela	3,117			4	8.70
San Isidro Alajuela	4,416	9.76	22	3	12.95
Las Cañas	2,559				
Puntarenas		4.25	20		

Notes on earthquakes.—None felt nor registered during the whole month.

## CLIMATOLOGICAL DATA FOR JAMAICA.

Through the kindness of Mr. H. H. Cousins, chemist to the government of Jamaica and now in charge of the meteorological service of that island, we have received the following table in advance of the regular monthly weather report for Jamaica:

Comparative table of rainfall for July, 1904.

[Based upon the average stations only.]

Divisions.	Relative area.	Number of stations.	Rainfall.	
			1904.	Average.
			Inches.	Inches.
Northeastern division	25	19	5.71	6.30
Northern division	22	43	2.34	3.25
West-central division	26	24	5.77	8.04
Southern division	27	34	3.21	4.17
Means	100	120	4.26	5.44

The rainfall for July was, therefore, below the average for the whole island. The greatest rainfall, 37.66 inches, occurred at Moore Town, in the northeastern division, while 0.21 inches fell at Lunalia Asylum, in the southern division.